

What is claimed is:

1. A digital lighting system controller with video input capability, comprising: a video decoder and computer display interface, an address and data generator, a memory, a pre-sequenced coordinates table, and a microprocessing unit, wherein said video decoder and computer display interface can receive and convert both video input and VGA input into a format to input to said address and data generator, said address and data generator then generates a plurality of data sets to be written into said memory, which further comprising an address area and a lighting data area, said pre-sequenced coordinates table stores the coordinates of lighting bulbs or dots in a preset sequence for said microprocessing unit to read, said microprocessing unit reads the coordinates in said table in a sequential order, finds the corresponding lighting data of that coordinates in said lighting data area, and outputs said lighting data.
2. A digital lighting system controller with video input capability as claimed in Claim 1, wherein said video input can be from LD, VCR, live video or camera equipments.
3. A digital lighting system controller with video input capability as claimed in Claim 1, wherein said VGA input can be one of the following computer images: analog VGA, DVI or LVDS interface data.
4. A digital lighting system controller with video input capability as claimed in Claim 1, wherein said address area has a format of (X,Y) coordinates to represent the X and Y coordinates of said lighting bulb, and said lighting data area has a format of (R,G,B) to represent the red, green and blue components of said lighting bulb.
5. A digital lighting system controller with video input capability as claimed in Claim 1, wherein said lighting data area 307 can be set to the size of 320X240, 640X480, 800X600, 1024X768 or 1280X1024.
6. A digital lighting system controller with video input capability as claimed in Claim 1, wherein said coordinates data in said pre-sequenced coordinates table can be downloaded from the RS-232 serial, parallel port, USB or IEEE1394, from memory devices such as ROM, EPROM, EEPROM, flash or other memory cards, or input from a keyboard.

7. A digital lighting system controller with video input capability as claimed in Claim 1, wherein said output lighting data can be either in the format of the DMX-512 standard that requires a fixed address, or serial data that does not require fixed address.
8. A digital lighting system controller with video input capability as claimed in Claim 1, said controller further comprising a pixel sharing algorithm for increasing resolution.
9. A digital lighting system controller with video input capability as claimed in Claim 8, wherein said pixel sharing algorithm is to compute the lighting data of a selected lighting bulb in combination of lighting data of neighboring lighting bulbs of said selected lighting bulb in order to obtain the lighting data of said selected lighting bulb.